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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,460	12/04/2001	John C Mackichan	36-1534	6449

7590 10/04/2004

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EXAMINER	
DO, CHAT C	

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/980,460	MACKICHAN ET AL.
	Examiner	Art Unit
	Chat C. Do	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/04/01;9/9/02*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/9/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 9, the term "such as" in line 2 is a relative term which renders the claim indefinite. The term "such as" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. For examination purposes, the examiner disregards limitations after the term.

Thus, claims 10-11 are also rejected for being dependent on the rejected based claim 9.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being obvious over Kimbrough et al. (U.S. 6,362,908) in view of Geigel et al. (U.S. 5,590,121).

Re claim 1, Kimbrough et al. disclose in Figure 5 data processing apparatus (abstract) comprising: a back-plane (90) for data signals in a plurality of different formats (e.g. receive or transmit in video format, special format, data/packet format, or POTS format), a plurality of filters to receive data signals in respective different formats from the back-plane (col. 10 lines 35-39 and col. 13 lines 45-50), and a plurality of processors (98, 92, 130, 94) to receive data derived from the back-plane in different formats respectively, at least one of the processors being operable to process data from one of the filters (col. 13 lines 45-50and being responsive to the outcome of data filtering performed by at least one other of the filters to adapt the processing performed thereby. Kimbrough et al. do not disclose in Figure 5 the plurality of filters are adaptive. However, Geigel et al. disclose in Figure 1 one of plurality of filters is adaptive as echo canceller in telephony network for efficiently canceling echo (150). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add adaptive filters as seen in Geigel et al.'s invention into Kimbrough et al.'s invention because it would enable to increase the system performance by efficiently filtering the desired signals.

Re claim 2, Kimbrough et al. do not disclose a feedback path to adjust filtering characteristics of at least one of the adaptive filters as a function of the outcome of the processing performed by at least one of the processors. However, Geigel et al. disclose in Figure 8 a feedback path to adjust filtering characteristics of at least one of the adaptive

filters as a function of the outcome of the processing performed by at least one of the processors (characteristic of adaptive filtering system is to use previous calculation and/or present calculation to update the current calculation). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention is made to add adaptive filters including a feedback path to adjust filtering characteristics of at least one of the adaptive filters as a function of the outcome of the processing performed by at least one of the processors as seen in Geigel et al.'s invention into Kimbrough et al.'s invention because it would enable to increase the system performance by efficiently filtering the desired signals.

Re claim 3, Kimbrough et al. further disclose in Figure 5 at least one of the processors is operable to carry out-processing according to a plurality of different algorithms (104) and to select at least one of them according to the outcome of processing performed by another of the processors (110).

Re claim 4, Kimbrough et al. further disclose in Figure 5 the back-plane includes an first conduit for signals in a first format (optical signal into 104 from 28) and a second conduit for signals in a second format (electrical signal into 108 and 100).

Re claim 5, Kimbrough et al. further disclose in Figure 5 the filters include a first filter to filter the signals in the first conduit (inherently for selecting narrow band) and a second filter to filter the signals in the second conduit (col. 10 lines 36-38).

Re claim 6, Kimbrough et al. further disclose in Figure 5 the processors include a first processor to process signals derived from the first conduit (104) and a second processor to process signals derived from the second conduit (120).

Re claim 7, Kimbrough et al. further disclose in Figure 5 an input to receive input signals to be processed (signal input into 104 as optical) and to supply the signals to the first and second conduits in the first and second formats (signals output to 108 and to 100).

Re claim 8, Kimbrough et al. further disclose in Figure 5 the first and second conduits are configured to convey optical (104 from 28 to other end is utilizing optical signals) and electrical signals respectively (104 from 108/100 to other end is utilizing electrical signals).

Re claim 9, it has similar limitations cited in claim 1 as method claim. Thus, claim 9 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 10, Kimbrough et al. further disclose in Figure 5 adjusting the filtering of data in one of the formats as a function of the outcome of the processing performed in another of the formats (e.g. signal processing or filtering in 92 is based on the pre-processing or pre-filtering in 90).

Re claim 11, it has similar limitations cited in claim 3 as method claim. Thus, claim 11 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. U.S. Patent No. 4,709,344 to Crawford discloses a programmable multi-frequency digital tone receiver.

b. U.S. Patent No. 5,408,424 to Lo discloses an optimal filtering by recurrent neural network.

c. U.S. Patent No. 5,511,092 to Cathers et al. disclose a data recovery technique which avoids a false convergence state.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (703) 305-5655. The examiner can normally be reached on M => F from 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2124

September 20, 2004

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100